



21st NREL Industry Growth Forum K2 Energy Solutions, Inc.

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K2 Energy Solutions, Inc.



- Nevada Registered C Corporation
 - Website: www.k2battery.com
 - Phone: 702-478-3590
 - Office: 1125 American Pacific Drive, Suite C
Henderson, NV 89074
- Headquarters in Henderson, NV
- Volume manufacturing in Shanghai, China

K2's Vision and Mission



- **VISION** - Be recognized by customers, peers, and the battery community as a technology leader in energy storage systems. We want to be perceived as a company that is helping solve the world's energy and environmental problems.
- **MISSION** – Provide best-in-class battery products and services at a competitive price to mobility and energy storage markets

Strategies and Goals



- Provide the highest energy density Lithium Iron Phosphate (LFP) products in the market
- Develop robust, commercially viable large format cells (>15 Ahr/cell)
- Target key large customers and markets that need the strengths of LFP
- Develop battery management solutions to meet mobility and energy storage system needs
- Institute sustainable product development to maintain K2's lead

Breakthrough Technology – LFP



- K2 has successfully developed a line of battery products utilizing LiFePO_4 – lithium iron phosphate (LFP)
- LFP is replacing existing battery technologies and opening new markets because of competitive advantages in
 - High energy density
 - High power density
 - Fast recharge times
 - Safety
 - Long cycle life
 - Flat discharge profile
 - Environmental friendly

K2's Competitive Advantages



- Solutions oriented product development and design team
- Highest capacity, lowest cost on market
- Products targeted to application
 - High energy series for energy storage
 - EV series for motive applications
 - Power series for high rate applications
- UL & CE certification
- Over 40 combined-years of experience in the LFP battery world

Team Capabilities

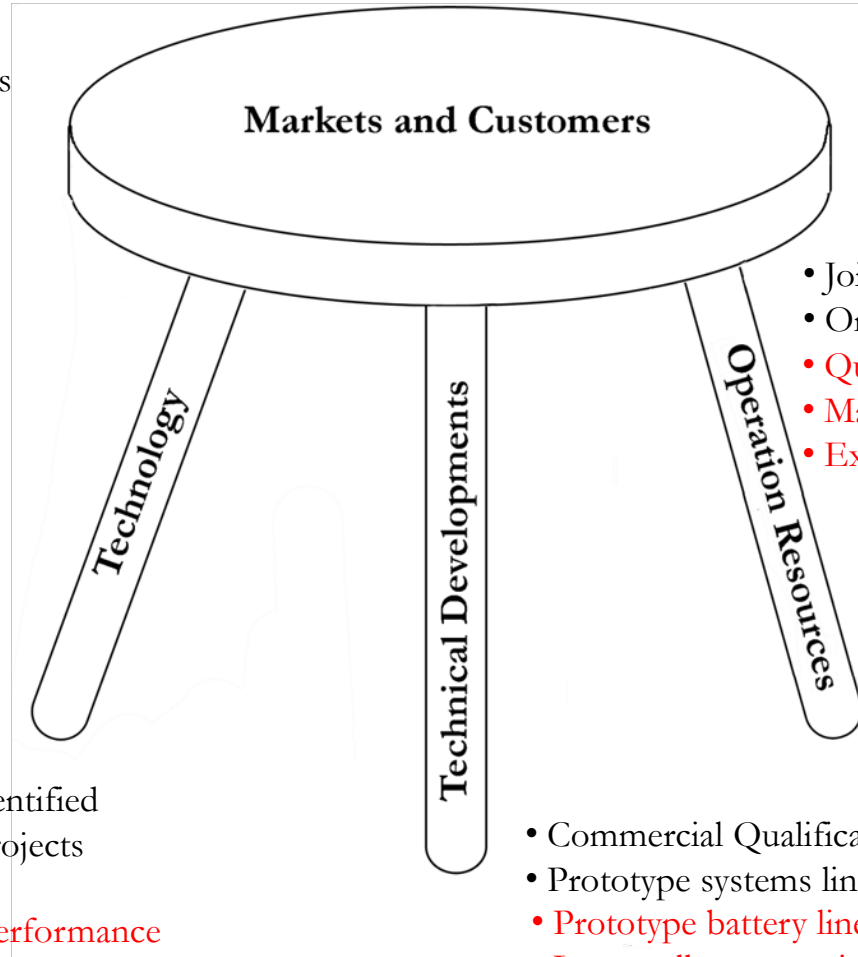


- **Seasoned Technical Team**
 - Successfully launched the first LFP commercial products
 - Expertise in LFP synthesis, production, and application
 - Comprehensive battery and electronics materials background
 - Proven track record of new product development and commercialization
- **International Operations Capability**
 - Operational and executive management experience at Fortune 500 companies
 - Experienced in Chinese venture registration, set-up, and operation
 - Operational staff fluent in 5 languages
- **Financial Team**
 - Experienced in public and private sector
 - Expertise in manufacturing and cost accounting
 - CFO experienced in IPO, mergers, and acquisitions
 - Licensed CPA with extensive public audit experience
- **Sales and Marketing**
 - Track record of closing multimillion dollar deals
 - Technical based sales approach
 - Degreed engineers

Accomplishments and Plans



- Company recognition
- Portable storage contracts
- EV/PHEV contracts
- Small mobility contract
- Power tool contract
- Large storage contract



- 4 Patents in process
- > 20 key technologies identified
- 2 Government funded projects
- 2 Industry partners
- Improved temperature performance
- Large cell launch

- Joint ownership of production facility
- On track to achieve all cost targets
- Quality system upgrade
- Majority ownership of operations
- Expansion to 150MWhr/yr

- Commercial Qualification of 6 products
- Prototype systems line operational
- Prototype battery line operational
- Large cell commercialization

Challenges to Success



- Time to acceptance
 - Small accounts of 6-9 months
 - Large accounts 18 months to 2 years
- Lithium Iron Phosphate chemistry is more difficult than oxide chemistries
- Balancing frugal use of resources with potential explosive growth
- Need for robust battery management systems that are multipurpose

LFP Growth Markets



- High growth markets of at least 15-20%
 - Power tools
 - Electric and hybrid vehicles
 - Personal transport



- Moderate growth markets of 4-6%
 - Computing and electronics
 - Electrical power management
 - Medical
 - Military



- LFP will take market share and outgrow markets
- K2 will take market share and outgrow with LFP

Applications with LFP



K2's Line of LFP Products



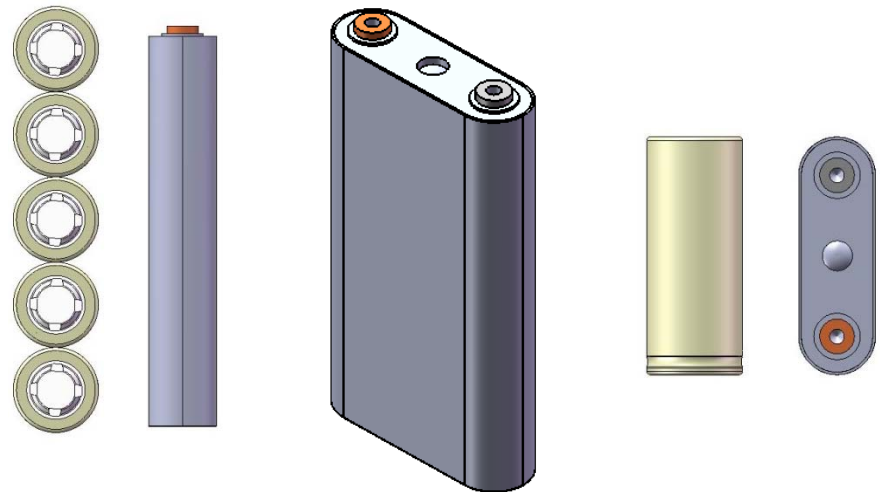
Commercially Available



LFP26650E
LFP26650EV
LFP18650E
LFP26650P
LFP18650P
LFP123A
LFP9V

In Development

Mid to large format cells, +15Ahr
LFP21-120650 (2nd Qtr 2009)



Competitive Landscape



Company	Valence		A123		K2 Energy	
Commercial Cells	18650E		26650M1		LFP26650E	
	26650P		18650P		LFP26650EV	
					LFP18650E	
					123A (16340)	
					LFP18650E	
					LFP26650P	
					9V	
Development Cells			26650HD	TBD	15 Ahr cell	Feb 09
			32113M1Ultra	TBD	50 Ahr Cell	Aug 09
			32157M1HD	TBD		

Key Customers



Under Purchase Agreement

- Custom EV - 2 year, \$10 Million Contract for EV, mobility, and portable power
- European Partner – EV and Large Storage, > \$10M annual potential
- Electronic equipment - Intrinsically safe, environmental test equipment, up to \$2M
- Advanced racing EV's – All electric racing, > \$1M
- PHEV Company - Hybrid to PHEV conversion, \$500k to \$1M
- Major outdoor equipment company - Portable, 12 V power packs, up to \$500k

Imminent Purchase Agreements

- Personal Mobility – In final contract negotiation, >\$50M annual potential

Development Agreements

- Hybrid Powertrain – Mainstream European manufacturer, up to \$22M
- Personal Mobility – Final tooling and commercial prototype phase, \$15-20M annual potential
- Electric Motorbike – All electric scooter, >\$10M
- High Profile Tool Company - Outdoor tools, up to \$3-5M

Current Capitalization



- Revenue Projections
 - 2008 - \$2M
 - 2009 - \$8M
 - 2010 - \$30M
- \$6.8 Million Paid in Capital
 - Founders and employees – 48%
 - EV Partner – 18%
 - European Partner – 10%
 - Chinese Partner – 6%
 - Other Investors – 18%
- Plan to raise \$30M for development and expansion

Use of \$30M



Sources of Funds		Uses of Funds	
Convertible Preferred Stock/Debt	\$30,000	Phase 1 Growth	
		Majority Equity Purchase	\$4,000
		High Power BMS Development	500
		Capex – Upgrade Equipment	1,000
		Working Capital	500
		Phase 2 Growth	
		Capex – Capacity Expansion	19,000
		Capex – IT and Technical	1,000
		Working Capital	2,000
		Contingency	2,000
Total	\$30,000	Total	\$30,000

Amounts in thousands, US\$

- 1st growth phase funding within 4-6 months
- 2nd phase funding follows as justified by customer demand

Thank you and questions